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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,875	03/15/2001	Christopher J. Edge	10275US01	5572

7590 12/01/2004
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EXAMINER

HARRISON, CHANTE E

ART UNIT	PAPER NUMBER
2672	

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/808,875	Applicant(s) EDGE, CHRISTOPHER J.	
	Examiner Chante Harrison	Art Unit 2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

1. This action is responsive to communications: Amendment filed on 5/20/04.
2. Claims 1-43 are pending in the case. Claims 1, 9, 16, 23, 28, 30, 31, 35, 37, 38, 41 and 43 are independent claims. Claims 1, 8, 9, 16, 23, 28, 30, 31, 35, 37, 38, 41 and 43 have been amended.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Akito Ohkubo, US 6,229,916, 5/2001.

As per independent claim 1, Ohkubo discloses obtaining a white point correction for a display device (col. 27-28, ll. 50-24); obtaining a chromatic correction for the display device (col. 28, ll. 35-61); and generating corrected color coordinates based on the white point and chromatic corrections (i.e. the white point and chromaticity values of the print are adjusted to that of the display followed by transformation of the adjusted values into RGB signals that make the perceived

Art Unit: 2672

colors of the print and the display match) (col. 21-22, ll. 50-15; col. 27-28, ll. 50-25; col. 29, ll. 1-8, 60-66; col. 30, l. 5-14, 20-24).

As per dependent claims 2, 13 and 20, Ohkubo discloses obtaining the white point correction by determining a white point correction matrix (col. 27-28, ll. 50-24); and obtaining the chromatic correction by determining a chromatic correction matrix (col. 28, ll. 35-61).

As per dependent claims 3, 14 and 21, Ohkubo discloses displaying a color on a display device, the color being defined by an original white point matrix in a D50 illuminant condition (col. 27, ll. 33-43, 50-60); and adjusting at least some white point matrix values so that visual appearance on the display device is visually equivalent to a print (i.e. the white point values of the print are adjusted to that of the display followed by transformation of the adjusted values into RGB signals that make the perceived colors of the print and the display match) (col. 27-28, ll. 50-25; col. 29, ll. 1-8, 60-66; col. 30, l. 5-14, 20-24, 35-44).

As per dependent claim 4, Ohkubo discloses adjusting maximum phosphor settings on a display (col. 21, ll. 5-15; col. 22, ll. 15-30; col. 27, ll. 30-52).

As per dependent claims 5, 15 and 22, Ohkubo discloses displaying a color on a display device, the color being defined by an original chromatic matrix in a D50 illuminant condition (col. 27, ll. 33-43; col. 27-28, ll. 50-64); and adjusting at least

Art Unit: 2672

some chromatic matrix values so that visual appearance on the display device is visually equivalent to a print (i.e. the chromaticity values of the print are adjusted to that of the display followed by transformation of the adjusted values into RGB signals that make the perceived colors of the print and the display match) (col. 28, ll. 35-67; col. 29, ll. 1-8, 60-66; col. 30, l. 5-14, 20-24, 35-44).

As per dependent claim 6, Ohkubo discloses adjusting chromaticity values in an RGB color space (col. 27, ll. 28-35.)

As per dependent claim 7, Ohkubo discloses adjusting chromaticity values in an AdobeRGB(d50) color space (col. 27, ll. 28-35.)

As per dependent claim 8, Ohkubo generating a single correction matrix (col. 28-29, ll. 8-8).

As per independent claim 9, Ohkubo discloses determining device-independent coordinates defining a color on a hard copy (col. 16, ll. 10-15, 20-25).

The rationale as applied in the rejection of claim 1 applies herein.

As per dependent claims 10 and 17, Ohkubo discloses displaying the color using the corrected coordinates (i.e. after obtaining the adjusted Lab*1 values the adjusted Lab*1 values are applied in the dynamic range compensation so

Art Unit: 2672

that colors perceived on the paper match the perceived colors of the display)
(col. 30, ll. 15-24, 31-44).

As per dependent claims 11 and 18, Ohkubo discloses the displayed color is visually equivalent to the color on the hard copy (col. 30, ll. 30-44).

As per dependent claims 12 and 19, Ohkubo discloses the white point correction is a white point correction matrix and the chromatic correction is a chromatic correction matrix. The rationale as applied in the rejection of claim 2 applies herein.

As per independent claim 16, Ohkubo discloses converting device-dependent coordinates that define a color in a printing device to device-independent coordinates (col. 15, ll. 45-56); adjusting the device-independent coordinates using a white point correction and a chromatic correction (col. 21-22, ll. 50-55; col. 27, ll. 30-52; col. 29-30, ll. 60-69); and converting the corrected device-independent coordinates to device-dependent coordinates that define a color in a display device (col. 16, ll. 44-55).

As per independent claim 23, Ohkubo discloses generating adjusted device-independent coordinates in the device-independent color space using a white point correction and a chromatic correction (col. 27, ll. 30-52; col. 29-30, ll. 60-

29); **adjusting maximum phosphor values** for a display device based on the adjusted device-independent coordinate in a device-independent color space so that a first color displayed on the display device matches white in a defined illuminant condition for a hard copy (col. 21, ll. 5-15; col. 22, ll. 15-30; col. 27, ll. 30-52); and adjusting color settings based on the adjusted device-independent coordinate in the device-independent color space so that a second color displayed on the display device matches a defined color in the defined illuminant condition (col. 21-22, ll. 50-15).

As per dependent claims 24, 32 and 39, Ohkubo discloses the defined illuminant condition is a D50 illuminant condition (col. 27, ll. 40-43).

As per dependent claim 25, Ohkubo fails to specifically disclose adjusting color settings within a computer program.

Ohkubo teaches obtaining image data for transformation and storage of the color data for reproduction of a soft copy on a computer (col. 1, ll. 34-40).

It would have been obvious to one of skill in the art to incorporate adjusting color settings within a computer program with the disclosure of Ohkubo because Ohkubo teaches an apparatus, which performs calculations, processing and storage of color data without user input (col. 7, ll. 14-56) for output to a computer display (col. 32, ll. 10-20) in the same manner as a program.

Art Unit: 2672

As per dependent claim 26, Ohkubo discloses adjusting chromaticity values in an RGB color space (col. 6, ll. 5-17; col. 21-22, ll. 50-15).

As per dependent claim 27, Ohkubo discloses adjusting chromaticity values in an AdobeRGB(50) color space (col. 27, ll. 28-35).

As per independent claim 28, Ohkubo discloses creating a first visual representation of an image on a hard copy (col. 32, ll. 40-43, 55-60); and creating a second visual representation of the image on a display device (col. 32, ll. 60-65) including adjusting device-independent coordinates in a device-independent color space based on a white point correction and a chromatic correction, such that the first visual representation and the second visual representation have different device-independent coordinates in the device-independent color space (col. 29-30, ll. 60-20), and wherein both white point and saturated colors on the display device are a good visual match to those of the hard copy (i.e. the white point and chromaticity values of the print are adjusted to that of the display followed by transformation of the adjusted values into RGB signals that make the perceived colors of the print and the display match) (col. 21-22, ll. 50-15; col. 27-28, ll. 50-25; col. 29, ll. 1-8, 60-66; col. 30, l. 5-14, 20-24, 35-44).

As per dependent claim 29, Ohkubo discloses the both white point and saturated colors on the display are visually equivalent to those of the hard copy

Art Unit: 2672

(i.e. the white point and chromaticity values of the print are adjusted to that of the display followed by transformation of the adjusted values into RGB signals that make the perceived colors of the print and the display match) (col. 21-22, ll. 50-15; col. 27-28, ll. 50-25; col. 29, ll. 1-8, 60-66; col. 30, l. 5-14, 20-24, 35-44).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 30-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akito Ohkubo, US 6,229,916, 5/2001.

As per independent claim 30, Ohkubo discloses a display device (col. 7, ll. 54-56); a memory device (col. 7, ll. 51-56); obtaining the correction data from the memory device (i.e. the look up table, LUT) (col. 27, ll. 60-64). Ohkubo fails to specifically disclose a processor coupled to the display device and the memory device.

Ohkubo discloses means for calculating data corresponding to the transformation of color signals, where the color signals may be stored and displayed on a medium (col. 7, ll. 20-30, 50-56).

It would have been obvious to one of skill in the art to incorporate a processor coupled to the display device and the memory device with the disclosure of Ohkubo because a means for calculating data performs the processing of data in the same manner as a processor.

The rationale as applied in the rejection of claim 1 applies herein.

Art Unit: 2672

As per independent claim 31, Ohkubo discloses a display device (col. 7, ll. 54-56); a memory device (col. 7, ll. 51-56). Ohkubo fails to specifically disclose a processor coupled to the display device and the memory device.

Ohkubo discloses means for calculating data corresponding to the transformation of color signals, where the color signals may be stored and displayed on a medium (col. 7, ll. 20-30, 50-56).

It would have been obvious to one of skill in the art to incorporate a processor coupled to the display device and the memory device with the disclosure of Ohkubo because a means for calculating data performs the processing of data in the same manner as a processor.

The rationale as applied in the rejection of claim 23 applies herein.

As per dependent claims 32 and 39, Ohkubo discloses the defined illuminant condition is a D50 illuminant condition (col. 27, ll. 40-43).

As per dependent claims 33 and 40, Ohkubo discloses adjusting chromaticity values in an RGB color space (col. 6, ll. 5-17; col. 21-22, ll. 50-55).

As per dependent claim 34, Ohkubo discloses adjusting chromaticity values in an AdobeRGB(50) color space (col. 27, ll. 28-35).

As per independent claim 35, Ohkubo discloses receives a first set of image data from the memory device defining a first visual representation of an image

Art Unit: 2672

on a hard copy (col. 32, ll. 40-43, 55-60); creating a second visual representation of the image on a display device (col. 32, ll. 60-65) including adjusting device-independent coordinates associated with the first set of image data in a device-independent color space based on a white point correction and a chromatic correction, such that the first visual representation and the second visual representation have different device-independent coordinates in the device-independent color space (col. 29-30, ll. 60-20) to generate second device-independent coordinates associated with the second set of image data in the device-independent color space (i.e. generating the adjusted coordinates corresponding to the computer display, e.g. self luminous display) (col. 29-30, ll. 60-29); and displays the image on the display (col. 30, ll. 40-45).

The rationale as applied in the rejections of claims 30 and 28 applies herein.

As per dependent claims 36 and 42, Ohkubo discloses the both white point and saturated colors on the display are visually equivalent to those of the hard copy (i.e. the white point and chromaticity values of the print are adjusted to that of the display followed by transformation of the adjusted values into RGB signals that make the perceived colors of the print and the display match) (col. 21-22, ll. 50-15; col. 27-28, ll. 50-25; col. 29, ll. 1-8, 60-66; col. 30, l. 5-14, 20-24, 35-44).

Art Unit: 2672

As per independent claim 37, Ohkubo discloses receiving the correction data as input (col. 27, ll. 30-40). The rationale as applied in the rejection of claim 30 applies herein.

As per independent claim 38, Ohkubo discloses the claim features of independent claim 31. Therefore the rationale as applied in the rejection of claim 31 applies herein.

As per independent claim 41, the rationale as applied in the rejection of claim 35 applies herein.

As per independent claim 43, Ohkubo discloses a color LUT (i.e. LUT's storing the color data and the corrected color data) (col. 29, ll. 62; col. 30, ll. 57-63), the color LUT corresponding to a first device (col. 29, ll. 61-62) and including illuminant condition values that do not correspond to actual illuminant conditions associated with the first device (col. 29-30, ll. 65-5), wherein an image rendered on a second device using the LUT is visually equivalent to the image rendered on the first device (col. 30, ll. 40-45).

Ohkubo fails to specifically disclose a profile data structure.

Ohkubo discloses look up tables for storing the color data and the corrected color data.

Art Unit: 2672

It would have been obvious to one of skill in the art to incorporate profile data structure with the disclosure of Ohkubo because a LUT stores data which relates input color data to output color data as does a profile data structure.

Response to Arguments

1. Applicant's arguments, see pp. 11, Para 2, filed 5/20/04, with respect to the rejection(s) of claim(s) 1-43 under Marsden have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Akito Ohkubo, US 6,229,916 B1, 5/2001.

Art Unit: 2672

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chante Harrison whose telephone number is 703-305-3937. The examiner can normally be reached on Monday - Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on 703-305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chante Harrison
Examiner
Art Unit 2672

Ceh

November 23, 2004



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